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Dollarization and the Multiple Currency Phenomenon in Lao PDR: Costs, Benefits and Policy Options

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Abstract
The multiple currency phenomenon (MCP) in Lao PDR takes the form of the use of foreign currencies such as dollars and baht in the presence of a domestically issued currency. The MCP has both costs and benefits. The costs include the social loss associated with seigniorage, the inability to conduct an independent monetary policy and the relative ineffectiveness of the exchange rate as an adjustment mechanism. The benefits of the MCP include the discipline imposed on the government by limiting its capacity to finance spending through inflation tax, and the stability and certainty induced by an effectively fixed exchange rate. Since the costs appear to exceed the benefits, how should the Government of Lao PDR respond? Enforcing the use of the kip is not the answer, and may well be counter-productive. This is because the MCP is not the *problem*, but is merely a *symptom*. The problem is a lack of confidence in the kip, whilst the symptom is the use of another currency such as the dollar or baht. The causes of the problem emanate from an underdeveloped monetary system, macroeconomic instability, and weak legal and institutional systems. These are the problems that need to be addressed directly. When these problems are addressed, then the symptom, which is the MCP, will also cease to be a constraint.

1. Introduction

The monetary situation in most transitional economies is characterised by the multiple currency phenomenon (MCP). Generally, the MCP takes the form of dollarization. Dollarization is defined as the widespread use of the US dollar as a medium of exchange and a store of value in the presence of the national currency. Lao PDR provides an almost unique case study of the MCP. This is because there are two foreign currencies, the US dollar and Thai baht, which are widely used as a substitute for the national currency, kip. The impacts of the MCP *a la* the Lao case are more complex than dollarization, and not very well understood.[1] Furthermore, the literature has ignored the experience of the Asian transitional economies, and focussed on the experience of the Latin American and South American countries.[2] In this paper, we try and overcome this knowledge gap through a careful analysis of the implications of the MCP in Lao PDR. What are the costs and benefits of the MCP? What policy should the Government pursue, if any, in responding to the MCP? These are some of the questions that we address in this paper.

We begin in Section 2 by considering what the MCP means. In Section 3, we assess the potential costs of the MCP, while Section 4 looks at the potential benefits of the MCP. Policy responses to the MCP are the subject of Section 5. Here we also assess the efficacy of the Government's policy of trying to increase the use of kip through enforcement measures. A final section concludes.

2. What is the Multiple Currency Phenomenon (MCP)?

The literature on the use of multiple currencies in a domestic economy distinguishes between two concepts: currency substitution and dollarization (see, for instance, Sahay and Vegh (1995); Calvo and Vegh (1995); Bruno (1993)). Currency substitution is defined as the use of a foreign currency as a medium of exchange in the domestic economy. Dollarization is defined as the use of a foreign currency as a medium of exchange *and* a store of value in the presence of a domestically issued currency. Thus, dollarization encompasses currency substitution but extends it to include the store of value function.[3]

[1] The range of substitution possibilities following movements in cross-rates for instance is greater than when only one foreign currency is used in the presence of the domestically issued currency.
[2] See, for instance, Salvatore *et al.* (2003), Berg and Borensztein (2000), and Sahay and Vegh (1995).
[3] Neither of these two definitions explicitly refers to the unit of account function of money. Nevertheless, since both definitions refer to the medium of exchange function, the unit of account function is implied in both cases.

The situation in Lao PDR is unique in that it does not fit into either the dollarization definition or the currency substitution definition, since there are two foreign currencies that are used domestically. In addition to the Thai baht and the US dollar, the dong and the yuan are also used in cross-border trade in the provinces that border Viet Nam and Yunnan, but only as a medium of exchange. Both the baht and dollar serve all the three functions of money in Lao PDR: they are widely used as a medium of exchange, store of wealth and unit of account. Thus, although the situation in Lao is more complicated than that implied by dollarization, it is closer to this definition than it is to currency substitution. The kip also serves all the three functions of money, but its use as a store of wealth is arguably less significant than with the foreign currencies.

3. Costs of the MCP

3.1 Seigniorage

The first and perhaps most significant cost of the MCP is the loss in "seigniorage" by the national monetary authority. Basically, seigniorage is the difference between the face value of currency and the cost of producing it. The ability of governments to issue token or paper money generates a very large social saving in the use of resources.[4] There are both *stock* and *flow* components associated with the social cost of the MCP. We begin by considering the costs emanating from the stock component.

Seigniorage: the stock component

The stock component can be best understood by looking at how the dollars or baht were brought into circulation. Every baht and dollar note currently in circulation in Lao PDR, apart from unilateral transfers in the form of aid flows, was obtained by exchanging goods, services, or claims on assets, equivalent to the face value of the stock of foreign currency in circulation. Thus, the seigniorage does not accrue to Lao PDR, but only to the issuing agency (in this case Thailand and the US).

There is also a flow aspect related to the stock component in the form of *holding cost*. The holding cost associated with the current stock of baht and dollars used for transaction purposes is the income foregone on interest-bearing assets. This is the income that could have been earned if the stock of foreign currency currently held for

[4] During the Gold standard for instance, this saving resulted from resources that would otherwise have to be expended in mining and smelting large quantities of metal such as gold. Similarly, the MCP deprives governments of this social saving to a large extent.

transactions purposes was invested in income-bearing assets such as bank deposits or bonds.[5] The interest foregone on holding domestically issued currency for transaction purposes has no net effect on the domestic economy; it only has a distributional effect within the economy. That is, there is a transfer between citizens, but no net change in overall income or welfare.[6]

Seigniorage: the flow component

If the stock component of seigniorage involved a one-off process of recouping the baht and dollars currently held for transaction purposes, then the costs associated with the flow component relate to the demand for money over *time*. With economic growth, there will be an increasing demand for money for transaction purposes.[7] To increase the stock of baht and dollars in Lao PDR, there must again be an exchange of goods, services, or claims on assets, which take place to bring the additional foreign currency into the country. In effect, Lao PDR will have to run a balance of payments surplus in order to increase its money supply.

It would be easier to understand the flow component if we thought of the benefits of being rid of the MCP, rather than the costs of the MCP. Consider a case where Lao PDR's GDP grows by 6 percent in a given year. Assume further that as a result the transactions demand for money also increases by 6 percent. Without the MCP, this would mean that the government could run a budget deficit (or reduce its budget surplus) by 6 percent without increasing inflation. That is, the growth in the economy allows the government to finance the budget deficit, or reduce the budget surplus, through the printing of money in a non-inflationary way. Indeed, without the MCP, the Lao PDR government could increase its budget deficit or reduce its budget surplus by the amount of the increase in transactions demand for money simply through the printing of money and without any increase in inflationary pressures.

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[5] Note that this holding cost applies only in the case where a foreign currency is used to serve the function of domestic money. The holding cost does not apply when the domestically issued currency is held for transaction purposes. This is because there is no, or little, cost associated with meeting the transactions demand for domestically issued money. The Central Bank could simply print the amounts required for transaction purposes, and the only cost incurred in this instance is the cost of *printing* money (rather than the cost equal to the face value of the money).

[6] To illustrate, consider the current situation in Lao PDR. If kip is held for transaction purposes, then the net effect (in terms of interest foregone) is zero because kip cannot be invested in banks or bonds overseas. If it could, then there would be a net inflow of income to the Lao economy (which is equivalent to the income foregone by not investing the kip overseas). If US dollars are held for transaction purposes, then the net effect (in terms of interest foregone) is equivalent to the income foregone by not investing the US dollars in banks or bonds overseas.

[7] In theory, the demand for money should decrease over time as financial development results in a reduced need for currency to effect transactions. Given the low level of development of the financial system in Lao PDR, this is unlikely to happen for some time.

In an economy with only foreign currencies in use, on the other hand, the increase in the transactions demand for money caused by economic growth can only be met by a balance of payments surplus. That is, there must be an increase in the stock of dollars or baht in circulation equivalent to the increase in the transactions demand for money. If this increased demand for transactions balances cannot be met, then it is likely to be deflationary. Meeting this increased demand for transaction balances involves a waste of resources equivalent to the loss in seigniorage.

The current situation in Lao PDR: impacts of stocks and flows

The kip is estimated to constitute about 50 percent of the money stock in Lao PDR. The baht is estimated at 30 percent, and dollars apparently make up the remaining 20 percent of the money stock.[8] In this situation, the difference between the face value of this stock of kip, and the cost of producing it, is social saving in the form of seigniorage. Indeed, if the government exercises monetary discipline and increases the stock of kip by a percentage equivalent to GDP growth times the share of kip in the money stock, then it will earn seigniorage on these new notes on a continuing basis. If GDP growth is 6 percent, and transactions demand for money increases by 6 percent, then the government can print money in a non-inflationary manner (and earn seigniorage) in the amount of:

$$0.5 \times 0.06 \times \text{the money stock}; \qquad (1)$$

where 0.5 = the share of kip in the money stock

and 0.06 = the growth in transactions demand for money (driven by economic growth).

What if the share of kip in the money stock could be increased over time from 50 percent to 60 percent, for instance? Using the example above, we can see how increasing the use of kip in the economy could result in quite substantial social gains from seigniorage. The gains will come from both the stock and flow components. The stock component implies that about 10 percent of the foreign currencies in circulation can be exchanged, in a one-off recouping transaction, for goods, services etc., since these notes will no longer be required for the medium of exchange function. Lao PDR will be able to recoup the original cost incurred in obtaining the stock of baht and dollars in circulation.

The one-off benefit from the stock component will equal:

$$0.2 \times 0.5 \times \text{the money stock}; \qquad (2)$$

where 0.2 = the percentage increase (0.1/0.5) in the share of kip from 50 percent to 60 percent

0.5 = the original share of foreign currency in the money stock.

The benefits from the flow component will equal:

$$0.6 \times 0.06 \times \text{the money stock}; \qquad (3)$$

where 0.6 = the new share of kip in the money stock

and 0.06 = the growth in transactions demand for money (driven by economic growth).

This benefit from the flow component can be earned on an *on-going* basis. Increasing the share of kip in the money stock over time will continue to yield social gains from both the stock and flow components. The gains from the stock component will cease when Lao PDR is completely free of the MCP. The gains from the flow component will accrue indefinitely, as long as the transactions demand for money grows with economic growth, and the government exercises monetary discipline.

3.2 Monetary Policy and Lender of Last Resort Function

The effective conduct of monetary policy in Lao PDR is impaired by the MCP and a weak financial system. Of course the MCP and a weak financial system are two limitations that are inter-related. The MCP is a reflection of a weak financial system, among other things.

The MCP impairs the ability of the Bank of Lao PDR to conduct an independent monetary policy. This is because capital inflows or outflows automatically change the money supply when a foreign currency can be used as a medium of exchange. An outflow of baht or dollars contracts the money supply, whilst an inflow would expand it. An outflow of baht or dollars could be deflationary, whilst an inflow could be inflationary.

The impact of these movements of capital on the money supply and domestic activity could be offset if the Bank of Lao PDR could conduct open market operations, for instance. The lack of monetary instruments in the form of kip-denominated interest-bearing assets prevents the Bank of Lao from conducting open market operations. Even if the Bank of Lao could issue kip-denominated interest-bearing assets, the lack

[8] This estimate is provided by the Bank of Lao PDR.

of confidence in the kip would limit their subscription. Other monetary instruments such as changes to the reserve requirement are likely to be blunt instruments of monetary policy because the MCP allows capital inflows to become part of the money stock without passing-through the financial system. Thus, the ability to conduct an independent monetary policy depends on addressing the MCP *and* improving the financial system.

The lender of last resort function of the Bank of Lao PDR is also somewhat impaired by the MCP. In the case of a generalized loss of confidence in the banking system, the monetary authorities would not be able to guarantee the whole payments system or to fully back bank deposits. The ability to print money as required is, after all, what allows a central bank to fully guarantee that all claims in domestic currency will be met. The MCP reduces the capacity of the central bank to print money, and thus also impairs its ability to perform its function as guarantor and lender of last resort.[9]

3.3 The Exchange Rate Mechanism and Policy

The MCP complicates the definition and measurement of the exchange rate in Lao PDR. There are three possible definitions of the nominal exchange rate that we consider: (i) the kip/US dollar exchange rate; (ii) the kip/baht exchange rate; and (iii) a "no exchange rate" case. First we consider the circumstances under which each of these definitions might apply, and then we examine the implications that follow from each.

The kip/US dollar exchange rate is our benchmark definition, and is the exchange rate that would be most relevant in the absence of the MCP. Accordingly, it is also perhaps the least relevant definition in Lao PDR at present given the MCP. The kip/baht exchange rate is the closest (bilateral) proxy to a trade-weighted exchange rate in Lao PDR. This is because most of Lao PDR's trade is conducted with Thailand. Again, this exchange rate is less important in Lao PDR than it would have been in the absence of the MCP. Finally, we have the "no exchange rate" case. The MCP could produce an outcome similar to that of having a permanently fixed exchange rate. How could such a situation arise? If prices charged by exporters *to* Lao PDR are set in dollars (or baht), and the prices of these goods in the domestic market are also set in dollars (or baht), then movements in the value of the kip/US

[9] Calvo's (2000) qualification that domestic banks can have access to liquidity through sources other than the printing press of the central bank does not apply in the case of Lao PDR because of its weak financial system.

dollar exchange rate, the kip/baht exchange rate, or any other definition of the exchange rate do not enter into the pricing decision of imports in the Lao PDR market. Similarly, if prices of Lao PDR's exports are determined in world markets in US dollar terms, or in terms of baht, then any movements in the exchange rates described above will not affect prices.[10] In these situations, even the term "exchange rate" is a misnomer because trade occurs as if without an exchange rate.

We begin by considering the implications of "no exchange rate" definition because it is likely to be the most relevant in the case of Lao PDR. If this definition applies, then the adjustment to economic shocks will require changes to prices directly since the nominal exchange rate cannot adjust. In other words, the *real* exchange rate movements required to move the economy back towards equilibrium following any economic shock will have to be induced by price changes rather than nominal exchange rate changes. This will have to involve changes in the rewards paid to factors of production, although it is most likely that nominal wages will have to bear the brunt of this adjustment.

If the adjustment to economic shocks must occur through changes in nominal wages, rather than through changes in the nominal exchange rate, then this has a number of implications for policy. For one thing, there are likely to be nominal rigidities in labour markets that limit, or at least slow down, the adjustment to external shocks. Even if there is significant unemployment of labour, wages rarely adjust quickly, or indeed fully, to demand-supply imbalances. There might also be an asymmetry in the response of wages. Depending on labour market conditions, and factors such as the level and strength of unionisation, nominal wages may be rigid downwards. If nominal wages are initially close to subsistence levels, then any downward adjustment in response to an external shock is going to be difficult. Thus, the adjustment mechanism that requires changes in wages instead of changes in nominal exchange rates is a relatively inefficient instrument. This could result in social costs involving the increased unemployment of resources such as labour and capital.

Even if the adjustment occurs through reduction in prices, the deflation associated with the real exchange rate reduction could have other negative consequences. The

[10] For a detailed discussion on the relationship between exchange rates and the prices of internationally traded goods, see Menon (1996a, b). The likely impact of (various definitions) of exchange rate changes on trade prices and trade flows in the Lao PDR context are discussed in Menon (1998a).

deflation, if unexpected, would result in high interest rates and potentially large transfers from debtors to creditors. The required deflation may also limit the extent to which real interest rates could fall to mitigate the reduction in real output.

If the more relevant exchange rate in Lao PDR is the kip/baht or trade weighted index, then this implies that economic and financial conditions in its trading partners will be the main determinant of Lao PDR's international competitiveness. In this case, economic and financial conditions overseas, rather than conditions at home, will determine its international competitive position. Domestic policy autonomy is greatly compromised as a result.[11]

It should be noted that, irrespective of which definition of the exchange rate is relevant, exchange rate policy is not an effective policy option for Lao PDR in the presence of the MCP. Even if the exchange rate was not "fixed", the loss in domestic autonomy associated with the trade-weighted index implies that any discretionary power in conducting exchange rate policy is limited. Another way of looking at this issue is to recognise that the inability of Bank of Lao PDR to conduct an independent monetary policy (see Section 3.2) implies that it is pointless pursuing exchange rate policy.

Although the kip/US dollar exchange rate is unlikely to affect Lao PDR's terms of trade, retail prices in the Lao market might respond to changes in the value of this rate. Changes in the kip/US dollar exchange rate will affect the purchasing power of incomes depending on whether they are paid in kip or dollars.[12] Over the recent past, there has been a trend of depreciation of the kip against the dollar. If domestic prices are determined (or fixed) in dollar terms, then the purchasing power of workers or owners of capital receiving their wages/revenues in US dollars will remain unchanged, whilst those of workers/capitalists receiving their incomes in kip will fall (in the absence of indexation). If domestic prices are set in terms of kip, then the purchasing power of workers or owners of capital receiving their wages/revenues in US dollars will increase, whilst that of workers/capitalists receiving their incomes in kip will remain unchanged. In either case, income distribution is likely to become

[11] Whilst very few small trading nations are insulated from economic and financial conditions in the global economy, the situation implied by this exchange rate involves close to no domestic autonomy whatsoever. The loss of autonomy is much greater than that implied by being "small" in the international trading sense.
[12] This assumes that when wages are *paid* in kip, then they are also *set* in terms of kip. In Cambodia for instance, government salaries are paid in the domestic currency, riel, even though they are actually set

more unequal, favoring those paid in US dollars, than before the depreciation of the kip. Thus, the MCP may be contributing to increasing inequality in the size distribution of income in Lao PDR.

4. Benefits of the MCP

4.1 Inflation tax

An issue related to seigniorage, and which operates through the ability of governments to issue money that is accepted by the public, is inflation tax. Inflation tax, which is a hidden tax, results in a redistribution of resources away from the public and towards the government (but without any net change in the economy as a whole). The following example will illustrate the way inflation tax works. Assume that Lao PDR is free of the MCP, and kip is the only money used in the economy. The government decides to run a budget deficit, and chooses to finance it by the printing of money rather than by raising taxes. In a kip economy, the government can now purchase additional goods and services without increasing taxes because it would be the first to spend the money that it prints. Who then pays for the additional purchases of the government? Citizens that hold their wealth in nominal balances will pay for the additional purchases of the government. If the printing of money results in a doubling of the money supply, say, then eventually the general price level will also have to double. Citizens that held nominal balances will find that their purchasing power has halved as a result of the doubling of the price level. In an economy characterised by the MCP such as Lao PDR, the capacity of governments to finance spending through inflation tax is limited. The MCP, in this respect, imposes discipline by limiting the ability of governments to finance spending through the printing of money. It also avoids distributional or equity concerns associated with the impact of government-induced inflation on different groups in society. That is, citizens who hold their wealth in nominal balances, or who have incomes that are not indexed to the inflation rate, will be made worse-off relative to those on indexed incomes.

4.2 Price effects

Floating exchange rates have displayed a considerable amount of variability. Variability is often discussed in terms of short-run volatility and medium to long-term misalignment of the currency. The short-term volatility (sometimes on a day-to-day basis) and the medium to long-term misalignment of floating exchange rates can increase the perceived risk associated with international trade and investment (see Williamson

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in terms of dollars (see Menon 1998b). Like with prices, what really matters is the currency in which wages are set, rather than then currency in which they are paid.

(1983); IMF (1984)). Some of the benefits of a fixed exchange rate are conveyed in a dollarised economy. These include exchange rate and price stability. Thus, to the extent that domestic and international transactions are conducted using the same currency, the MCP dampens the effects of short-run volatility associated with floating exchange rates (it does not, however, deal with the medium to long-term misalignment issue, which relates to its role as an adjustment mechanism- see Section 3.3).

4.3 Larger stock of reserve currency

There are only a limited number of currencies that are freely accepted in payment for goods and services traded internationally. The currency of countries such as Lao PDR is not accepted in exchange for imported goods and services, or for repayment of liabilities. Indeed, it appears that even Thai traders will not accept kip in cross-border trade. More importantly, however, the kip is not convertible outside Lao PDR. In this context, the capacity to import is limited by export receipts and capital inflow. The MCP, however, alleviates this constraint to some extent. With a stock of dollars (or baht) in circulation, the liquidity constraint associated with hard currency is reduced during periods of low exports or reductions in capital inflow. Thus, dollars (or baht) in the hands of the public could be used to finance imports during periods of crisis.

On the other hand, however, the stock of foreign currency is tied-up in serving the function of domestic money, for domestic transactions, on a day-to-day basis. As discussed earlier, there is a holding cost in the form of foregone earnings associated with the use of foreign currency as the medium of exchange. Thus, on the whole, it is unclear if the MCP does indeed serve as a safeguard in terms of the capacity to finance imports, except perhaps during periods of crisis or severe shortage of reserve currency. If the stock of foreign currency is run down to finance imports during a period of crisis, they will have to be built up again in the future in order to continue serving the function of a medium of exchange. If they are not built up again, then the money supply will contract and this will be deflationary. Thus, the MCP might allow, at best, an inter-temporal trade-off that cushions the economy during periods of crisis, but that is all.

5. Policy Responses to the MCP

From the discussion above, it would appear that the MCP in Lao PDR has more costs than benefits. If this is the case, then how should Lao PDR go about reversing the MCP, or increasing the use of kip in the economy? The only sustainable move away from the MCP and towards increased usage of kip must come from increased confidence in the kip. In this sense, the MCP in Lao PDR is not the *problem*, but is a *symptom*. The problem, or the *cause*, is a lack of confidence in the kip, whilst the symptom, of the *effect*, is the use of another currency such as the US dollar. The causes of the problem emanate from an underdeveloped monetary system, macroeconomic instability, and weak legal and institutional systems. Furthermore, the lack of monetary instruments in the form of kip-denominated interest-bearing assets further limits the use of kip as a store of value. Most of these problems are long-term in nature, and are characteristic of an economy in transition. When these problems are addressed, then the symptom in the form of the MCP will also disappear. To a certain degree, this is exactly what has happened in neighbouring Viet Nam, where the use of the US dollar as a medium of exchange has diminished as the monetary and institutional systems have developed and matured, and as macroeconomic stability has been restored.

What can be done to begin the process of reversing the MCP in the short to medium term? Should the government try and enforce the increased use of the kip? In other words, should the government address the symptom directly in the hope that the causes will diminish over time? The Lao PDR government has tried to do this in June 1997, when the Bank of Lao moved to enforce the decree that stipulates that only the kip could be used as a medium of exchange in all domestic transactions in Lao PDR.[13]

The increased policing of the use of the kip almost certainly increased its use in domestic transactions. Nevertheless, there is no doubt that the baht and dollar continued to be used in domestic transactions. At best, this enforcement measure might have increased the use of kip, but it has not eliminated the use of other currencies in domestic transactions. It is also unclear if this enforcement measure has increased the share of the kip in the money stock. It is claimed that the enforcement measures were introduced in response to the depreciation of the kip against both the baht and the dollar (and concerns regarding an increase in illegal black markets dealings). Instead of stemming the depreciation, the introduction of the enforcement measures corresponded with further depreciation of the kip. Although there could have been a number of factors causing the depreciation of the

[13] This move was essentially an enforcement measure, as Decree No. 53, dated September 7, 1990, had made it illegal to employ foreign currencies in domestic transactions.

kip, it would appear that one important factor was the uncertainty associated with, and resultant loss of confidence in, the kip after the enforcement measures were announced. Indeed, the kip was perhaps the only currency to have fallen in value against the baht during a time when the baht was depreciating against every other currency (during the early phase of the Asian crisis).

The depreciation of the kip against the baht and the dollar since the enforcement measures were announced could have more than offset any increase in the volume of kip used in domestic transactions. Thus, this policy of trying to force the use of the kip could have been counter-productive. Rather than increase its value share in the money stock, enforced usage of the kip may have lead to a reduction in its share following depreciation in its value against other currencies. It has also probably lead to a further weakening of confidence in the kip, with concerns (irrespective of their validity) regarding future actions by the government.

To see how the depreciation of the kip could have reduced its share in the money stock, consider the following case. Assume that the share of the kip in June 1997, prior to the enforcement measure, was 50 percent of the money stock. The baht constitutes 30 percent, and the remaining 20 percent are made up of US dollars. For simplicity, assume that the value of the money stock in June 1997, measured in US dollars, is equivalent to US$1 million. That is,

$$\begin{aligned} \text{Money stock} &= \text{US\$1 m} \\ &= S(\text{kip})\,(\text{US\$1 m}) + S(\text{baht})\,(\text{US\$1 m}) + S(\text{US\$})\,(\text{US\$1 m}) \end{aligned} \tag{4}$$

Where S(kip) = share of kip in the money stock = 0.5
S(baht) = share of baht in the money stock = 0.3
S(US$) = share of US dollars in the money stock = 0.2.

Between May 1997 and December 1997, the kip depreciated against both the baht and the dollar. The extent of the depreciation, based on average buy/sell rates in the parallel market, is as follows. The extent of the depreciation of the kip against the baht was about 10.3 percent, with the kip/baht exchange rate changing from 43.58 kip in May 1997 to 48.08 kip in December 1997. The extent of the depreciation of the kip against the dollar, on the other hand, was about 82.3 percent, with the kip/US dollar exchange rate changing from 1135 kip in May 1997 to 2069.5 kip in December 1997. How did these exchange rate movements affect the shares of kip, baht and dollars in the money stock? Assuming no change in the volumes of the respective currencies, the new shares (denoted as S_n) in the money stock are:

$$S_n(\text{baht}) = 0.3\ (1.103) = 0.331$$
$$S_n(\text{US\$}) = 0.2\ (1.823) = 0.365$$
$$S_n(\text{kip}) = 1 - (0.331 + 0.365) = 0.304$$

Thus, the depreciation of the kip has resulted in its share in the money stock falling from 50 percent to about 30 percent. While the kip used to have the highest share in the money stock, the valuation effect from the depreciation has reduced it to having the smallest share. Due to the massive depreciation of the kip against the dollar, US dollars now have the highest share in the money stock, when it used to have the smallest share. To the extent that the depreciation was caused by the uncertainty introduced by the enforcement measure, the outcome has been counter-productive.

To return the share of the kip in the money stock to 50 percent, the usage of the kip would have to increase by about 65 percent.[14] It is unlikely that the enforcement measure would have resulted in a 65 percent increase in the usage of the kip. It should be noted, however, that this is purely an illustrative example. Whilst the magnitudes of the changes in the relative shares of the currency may not be precise, the overall direction of change would be accurate. The magnitudes of the changes in the relative shares of the currencies would also be affected by currency substitution effects. For instance, discussions with Lao officials indicate that there has been a substitution away from both baht and kip and towards the dollar after the depreciation of both currencies following the Asian crisis. Although the baht continued to be used in cross-border trade along the Mekong, there had been some shift away from baht and towards dollars following large fluctuations in the relative value of the baht in the aftermath of 1997 crisis. These currency substitution effects are likely to affect the relative shares of baht and dollars in the money stock; they are unlikely to affect the share of kip in the money stock to any significant extent.

Imposing or forcing the use of the kip is not the answer. Perhaps the best way of reducing the use of foreign currencies in Lao PDR is to reduce the *distinctions* between the kip and these currencies. Enforcing the use of kip is likely to add to the distinctions, or perceived differences, rather than reducing them. If citizens are given

[14] That is, $\{(0.5 - 0.303) / 0.303\} \times 100 = 65$ percent.

the free choice to use kip, baht or dollars in any and all transactions, then the perceived differences between the two are likely to slowly diminish over time.

Reducing the distinction between the currencies will involve, as a fundamental requirement, the assurance that kip can be converted into dollars freely and in any quantity. With the current situation, where confidence in the kip is low, this policy would effectively limit the government to issuing kip on an almost one-to-one basis with foreign reserves. It could be argued that the present stock of kip, estimated at about 50 percent of the money supply, currently reflects this aspect of convertibility already. Thus, the transition from an economy characterised by the MCP to a kip-based economy will depend on the willingness of Lao PDR's citizens to hold the kip. This willingness will require an assurance of free convertibility initially, and confidence in the value of the kip eventually. In the interim, however, measures that impose the use of kip should be removed in an attempt to reduce the distinctions, whether perceived or real, between the currencies. We cannot escape the conclusion however that the root causes of the MCP will need to be addressed directly, and that there is no other long-term solution to dealing with its implications.

6. Summary

The multiple currency phenomenon (MCP) in Lao PDR takes the form of the use of foreign currencies such as dollars and baht in the presence of a domestically issued currency. The MCP appears to have more costs than benefits. These costs include the social loss associated with seigniorage, the inability to conduct an independent monetary policy and the relative ineffectiveness of the exchange rate as an adjustment mechanism. The benefits of the MCP include the discipline imposed on the government by significantly limiting its capacity to finance spending through inflation tax, and the stability and certainty induced by an effectively fixed exchange rate. Having a stock of dollars or baht in circulation is sometimes viewed as a significant benefit of the MCP. At best, it can act as a cushion that alleviates the short-term effects of a crisis; but that is all.

In June 1997, the Bank of Lao PDR moved to enforce Decree No. 53, which stipulates that only the kip could be used as a medium of exchange in all domestic transactions. This move would reflect the Government's view that the costs of the MCP exceed the benefits. Is enforcement the solution to overcoming the MCP? Any enforced measure is likely to be counter-productive, as it will increase the perceived differences between the currencies, rather than reduce them. Enforcement does not address the underlying problem of a lack of confidence in the kip. Although it might be possible to increase the use of the kip in domestic transactions through increased policing, any such increase could be reversed by depreciation of the kip. Since the enforcement measures have been in place, the kip has depreciated to such an extent that its share in the money stock has fallen. Indeed, the share of the kip in the money stock following the enforcement measures resulted in it being lower than it has ever been, and lower than the shares of dollars or baht in the money stock.

The long-term solution to the MCP does not lie with imposing the use of the kip. This is because the MCP is not the *problem*, but is merely a *symptom*. The problem (or the *cause*) is a lack of confidence in the kip, whilst the symptom (or the *effect*) is the use of another currency such as the dollar or baht. The causes of the problem emanate from an underdeveloped monetary system, macroeconomic instability, and weak legal and institutional systems. These are the problems that need to be addressed directly. When these problems are addressed, then the symptom, which is the MCP, will also cease to be a constraint.

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